Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act	)	GN Docket No. 16-245

COMMENTS OF MOBILE FUTURE

Mobile Future submits these comments in response to the Federal Communications Commission's Twelfth Broadband Progress Notice of Inquiry.[1] The extremely rapid deployment and widespread availability of mobile broadband, with nearly the entire United States population now covered by multiple 4G LTE networks, leaves no question that mobile broadband is "being deployed to all Americans in a reasonable and timely fashion."[2] Meanwhile, providers continue to invest in their networks, deploying thousands of new antennas and increasing coverage and capacity each year, all the while planning for future next generation 5G networks. As the Commission conducts its statutorily mandated assessment on broadband deployment, it must ensure that 4G LTE services are included in its definition of "advanced telecommunications capability" and must decline to adopt criteria or benchmarks that would exclude popular and widely adopted services from its inquiry.

The Commission should also maintain its focus on the question presented in the statute – whether advanced telecommunications capability is being deployed – and should avoid straying

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[1] *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All*

[2] 47 U.S.C. § 1302(b).

onto unrelated topics including rate regulation and privacy and security requirements. The Commission should instead focus on adopting policies that will incentivize and further accelerate mobile broadband deployment, by freeing additional low-, mid-, and high-band spectrum for mobile use and fostering investment. Mobile Future is concerned about the impact that an increased regulatory environment will have on our competitive mobile broadband market. The Commission must ensure that consumers continue to have access to innovative services and offerings, including programs that offer free data and facilitate increased access to vital services via mobile networks. And while the recent targeted amendment of the Collocation Agreement was a welcomed reform,[3] the Commission should continue efforts to achieve more broad-based environmental and historic preservation relief, expedite local siting approvals, improve access to poles and rights-of-way, and encourage reasonable Tribal fees. Making spectrum available, promoting investment, and streamlining infrastructure processes are critical measures that will allow continued LTE growth and unlock our nation's 5G future – and further advance the Commission's Section 706 goals.

I. MOBILE BROADBAND IS UNDOUBTEDLY BEING DEPLOYED TO ALL AMERICANS IN A REASONABLE AND TIMELY FASHION

The United States leads the world in 4G LTE deployment, investment, and adoption. As of July 2015, mobile providers had deployed LTE service to 99.6 percent of the U.S. population.[4] Nearly 98 percent of the population had access to two or more LTE providers, nearly 92 percent

[3] Wireless Telecommunications Bureau Announces Execution of First Amendment to the Nationwide Programmatic Agreement for The Collocation of Wireless Antennas, Public Notice, DA 16-900 (WTB rel. Aug. 8, 2016).

[4] *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services*, Eighteenth Report, 30 FCC Rcd 14515, 14541-42 ¶ 38, Chart III.A.3 (WTB 2015) ("18th Mobile Competition Report").

had access to three providers, and a remarkable 82 percent had access to four or more providers.[5] And those statistics are already more than an entire year out of date. Given that between 2014 and 2015, providers deployed LTE to 73 percent of the Americans who were not previously covered by LTE networks,[6] we can only assume that even more than 99.6 percent of Americans now have access to LTE. This infrastructure feat is particularly astounding considering LTE deployment in the United States only began in late 2010 – less than six years ago.[7] The rapid and expansive deployment of LTE networks is the result of wireless providers' significant network investments – more than $152 billion since 2010.[8] Investment in mobile networks shows no signs of slowing. In 2015 alone, wireless providers invested almost $32 billion in mobile networks, adding nearly 10,000 new cell sites.[9]

United States investment in and adoption of mobile networks far outpaces the rest of the world. In 2014, U.S. providers invested 62 percent more in their networks on a per capita basis

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[5] *Id.*

[6] *See Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services*, Seventeenth Report, 29 FCC Rcd 15311, 15340-41 ¶ 59, Table III.A.2 (2014) (98.5 percent of the population covered by LTE); 18th Mobile Competition Report at 14541-42 ¶ 38, Chart III.A.3 (99.6 percent of the population covered by LTE).

[7] *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services*, Fifteenth Report, 26 FCC Rcd 9664, 9720 ¶ 70 (2011).

[8] CTIA, CTIA Wireless Industry Survey (May 2016), http://www.ctia.org/your-wireless-life/how-wireless-works/annual-wireless-industry-survey (reporting cumulative capital expenditures of more than $462 billion in 2015, compared to $430 billion in 2014, and $310 billion in 2010).

[9] CTIA, CTIA Wireless Industry Survey (May 2016), http://www.ctia.org/your-wireless-life/how-wireless-works/annual-wireless-industry-survey (reporting 307,626 cell sites in 2015, compared to 298,055 cell sites in 2014).

than their European Union counterparts combined.[10] LTE penetration in North America is up to 54 percent, with 237 million LTE connections, compared to just 24 percent in Western Europe and the Asia Pacific.[11] A larger percentage of customers subscribe to LTE in North America than in any other region in the world. These facts further support a determination that the delivery of mobile broadband services to all Americans is both reasonable and timely.

II. THE COMMISSION SHOULD NOT REQUIRE ACCESS TO BOTH FIXED AND MOBILE BROADBAND TO FIND THAT ADVANCED TELECOMMUNICATIONS IS BEING DEPLOYED ON A REASONABLE AND TIMELY BASIS

The Commission must abandon its conclusion in the 2016 Broadband Progress Report and in the NOI that deployment of advanced telecommunications capability requires access to *both* fixed and mobile broadband services.[12] Section 706 mandates that the Commission conduct its inquiry "without regard to any transmission media or technology,"[13] and requiring access to multiple technologies directly contradicts the plain language of the statute. If the Commission continues to require access to both services, it should assess deployment separately

[10] Strand Consult, *The Wireless Ecosystem: US v. EU*, at 4 (Apr. 2016), https://morningconsult.com/wp-content/uploads/2016/04/Strand-Consulting-Net-Neutrality-Paper.pdf (reporting 2014 infrastructure investment totals of $78 billion in the United States versus $48 billion in the European Union).

[11] *See* Press Release, 5G Americas, Year-End 2015: Global LTE Connections Reach beyond the Billion Mark (Mar. 8, 2016), http://www.4gamericas.org/en/newsroom/press-releases/year-end-2015-global-lte-connections-reach-beyond-billion-mark.

[12] *See Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act,* 2016 Broadband Progress Report, 31 FCC Rcd 699, 708-19 ¶¶ 20-44 (2016) ("2016 Broadband Progress Report"); NOI at 2, 14 ¶¶ 3, 37.

[13] 47 U.S.C. § 1302(d)(1) ("The term 'advanced telecommunications capability' is defined *without regard to any transmission media or technology*, as high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications *using any technology*.") (emphasis added).

for each. In doing so, the Commission will undoubtedly find that mobile broadband deployment meets the Section 706 "reasonable and timely" standard.

The Commission's approach also ignores the reality that mobile is increasingly a competitive alternative for fixed broadband and that a growing number of consumers exclusively rely on mobile broadband for Internet access. This is particularly true for minority consumers.[14] According to a 2015 Pew Research Center study, 13 percent of Americans use *only* their mobile device to access the Internet at home, up from 8 percent in 2013.[15] Accordingly, the Commission should refrain from requiring the availability of both fixed and mobile broadband services and instead find that advanced capability is being deployed wherever consumers have access to either service.

III. THE COMMISSION SHOULD NOT ADOPT CRITERIA THAT WOULD ELIMINATE CONSIDERATION OF POPULAR, WIDELY ADOPTED SERVICES

The services and speeds that are available today, as well as evidence regarding what services consumers are choosing, are both highly relevant to the Commission's benchmark determination.[16] Given that more than half of mobile consumers opt for 4G LTE connections, any criteria that the Commission adopts for mobile broadband, including speed criteria, must ensure that 4G LTE services are not excluded from the definition of "advanced telecommunications capability." Yet the proposed 10 Mbps download/1 Mbps upload speed

[14] Monica Anderson, Pew Research Center, *Racial and ethnic differences in how people use mobile technology* (Apr. 30, 2015), http://www.pewresearch.org/fact-tank/2015/04/30/racial-and-ethnic-differences-in-how-people-use-mobile-technology (13 percent of Hispanic adults and 12 percent of African-American adults are "smartphone-dependent.").

[15] John B. Horrigan & Maeve Duggan, Pew Research Center, *Home Broadband 2015: The share of Americans with broadband at home has plateaued, and more rely only on their smartphones for online access*, at 2 (Dec. 21, 2015), http://www.pewinternet.org/files/2015/12/Broadband-adoption-full.pdf.

[16] *See* NOI at 14 ¶ 38.

benchmark proposed in the NOI could do just that. While many networks may achieve peak speeds far greater than the proposed benchmark, the proposed speed benchmark exceeds the minimum advertised 4G LTE speeds offered by all major wireless providers.[17] Should the Commission adopt such a benchmark and use data focused on the minimum advertised speed, it may well ensure that it reaches the misguided conclusion that advanced telecommunications capability is not being deployed to *any* American, let alone on a reasonable and timely basis. Moreover, the proposed benchmark is completely divorced from the reality of how Americans actually use their mobile network connections. For example, Netflix recommends a download speed of only 5 Mbps for streaming HD video,[18] and limited download speeds when streaming to many mobile devices to just 600 Kbps as recently as this year.[19] Meanwhile, Skype recommends

[17] *See, e.g., About T-Mobile*, https://www.t-mobile.com/company/company-info/consumer/internet-services.html (advertising download speeds of 6-20 Mbps and upload speeds of 2-5 Mbps) (last visited Aug. 25, 2016); Bluegrass Cellular, *Shop Plans*, https://bluegrasscellular.com/shop/plans?tab=data-plan-section (advertising download speeds of 3-12 Mbps) (last visited Aug. 25, 2016); *Sprint 4G LTE plan details*, http://shop.sprint.com/modals/4g_lte_plan_details.html (advertising download speeds of 6-8 Mbps and upload speeds of 2-3 Mbps) (last visited Aug. 25, 2016); *U.S. Cellular's Mobile Broadband Open Internet Practices*, https://m.uscellular.com/uscellular/legal/open_internet.html (advertising 4G LTE download speeds of 3-6 Mbps and upload speeds of 1-3 Mbps) (last visited Aug. 25, 2016); Verizon, *4G LTE speeds vs. your home network*, https://www.verizonwireless.com/archive/mobile-living/network-and-plans/4g-lte-speeds-compared-to-home-network (advertising download speeds of 5-12 Mbps and upload speeds of 2-5 Mbps) (last visited Aug. 25, 2016).

[18] Netflix, *Internet Connection Speed Recommendations*, https://help.netflix.com/en/node/306 (last visited Aug. 25, 2016).

[19] Anne Marie Squeo, Netflix, *Helping Netflix Members Get More from Their Mobile Data Plans* (Mar. 24, 2016), https://media.netflix.com/en/company-blog/helping-netflix-members-get-more-from-their-mobile-data-plans.

a download speed of just 1.5 Mbps for HD video calls.[20] The Commission cannot ignore these popular, widely adopted services if it chooses to adopt a particular speed benchmark.

The Commission should also reject its proposal to base its benchmark determination on the requirements of services it predicts may exist in the future.[21] Indeed, the Commission has previously rejected the idea of setting a "forward-looking" benchmark in the past two reports.[22] The NOI offers no policy or legal rationale for doing so now.

Nor should the Commission include other non-speed benchmarks in its assessment. First, the Commission should not inject a government assessment of data allowances, adoption, pricing, and availability of multiple providers into the straightforward, statutorily defined inquiry into broadband deployment.[23] Moreover, as the Commission observed in the 2016 Broadband Progress Report, the agency lacks the comprehensive data needed to effectively measure service quality and consistency.[24] Adopting these criteria would distract from the Commission's task of promoting competition and deployment.

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[20] Skype, *How much bandwidth does Skype need?*, https://support.skype.com/en/faq/FA1417/how-much-bandwidth-does-skype-need (last visited Aug. 25, 2016).

[21] *See* NOI at 14-16 ¶¶ 38-42.

[22] *See* 2016 Broadband Progress Report at 722-23 ¶¶ 51-55; *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, 2015 Broadband Progress Report and Notice of Inquiry of Immediate Action to Accelerate Deployment, 30 FCC Rcd 1375, 1391 ¶ 23 (2015).

[23] *See* NOI at 722-23 ¶¶ 51-56.

[24] 2016 Broadband Progress Report at 727-28 ¶¶ 68-70.

IV. CONCLUSION.

Mobile broadband, particularly 4G LTE networks, has been deployed at an astounding pace in the United States, and investment in mobile networks shows no signs of slowing down. The Commission has no choice but to conclude that mobile broadband is being deployed on a reasonably and timely basis. Going forward, the Commission should focus on policies that foster continued broadband deployment, including streamlining infrastructure review processes and continuing to make additional spectrum available for mobile broadband.

Respectfully submitted,

By: /s/ Jonathan Spalter

Jonathan Spalter, Chairman
Allison Remsen, Executive Director
MOBILE FUTURE
1325 Pennsylvania Avenue, N.W., Suite 600
Washington, D.C. 20004
(202) 756-4154
www.mobilefuture.org

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